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Claims

1. A method of maintaining partition information relating a disc drive, the method comprising steps of, when the disc drive has power applied to it:
- 10 (a) detecting partition information which is located in the first sector of a partition of the disc drive and determining if it is valid;
 - (b) comparing the valid partition information with a corresponding duplicate of the partition information which is located in a reserved area;
 - 15 (c) for valid partition information which is the same as the corresponding duplicate of the partition information, continuing a standard booting procedure for the disc drive;
 - (d) for valid partition information which is not the same as the corresponding duplicate partition information, storing the valid partition information in the reserved area; and
 - 20 (e) for partition information which is not valid, replacing the invalid partition information with partition information which is valid.
2. The method according to claim 1 in which the step (a) includes determining partition information which is corrupt, is missing, or has been
- 25 deleteriously altered by a virus.
3. The method according to claim 1 wherein the reserved area is a dedicated area on a disc of the disc drive which is reserved for the purpose of storing duplicate partition information and which is equally divided by
- 30 the number of partitions which exist on the disc drive.
4. The method according to claim 1 wherein the reserved area is located on firmware.

- 5 5. The method according to claim 1 wherein the duplicate partition information is appended with the date on which it was created.
6. The method according to claim 1 in which, if no space is available in the reserved area, the step (d) further comprises steps of:
- 10 (f) removing the oldest duplicate partition information from the reserved area; and
- (g) storing the newest duplicate partition information therein.
7. The method according to claim 1 wherein partition information which is
- 15 not valid is replaced by corresponding duplicate partition information which is valid and which is stored in the reserved area.
8. The method according to claim 1 wherein the user is presented with a list of duplicate partition information which has been appended with the date
- 20 on which it was created and which is stored in the reserved area, and the user selects the version of corresponding duplicate partition information which will replace the invalid partition information.
9. The method according to claim 8 wherein the instructions which result in
- 25 the presentation of the duplicate partition information to the user are contained in:
- (a) a storage medium which is read using a peripheral device; or
- (b) firmware such as the Basic Input/Output System (BIOS).
- 30 10. A system for maintaining information relating to partitions in disc drives associated with a computer, the system comprising:
- at least one disc drive;
- firmware controlling the initialization of the computer and its peripheral devices; and

5 instructions installed on the firmware which are executed upon
 detection of invalid partition information, the instructions
 redirecting the system to seek valid partition information.

11. The system according to claim 10 wherein the disc drive is divided into
10 one or more partitions, each partition containing partition information
 which relates to the use of sectors within that partition and the location of
 at least one other partition which is located elsewhere on the disc drive.

12. The system according to claim 10 wherein the firmware controlling the
15 initialization of the computer is a programmable read only memory device.

13. The system according to claim 10 wherein the firmware controlling the
 initialization of the computer executes Basic Input/Output System (BIOS)
 software.

20 14. The system according to claim 13 wherein the BIOS contains
 instructions for determining the validity of partition information which is
 located in the first sector of each partition in the disc drive.

25 15. The system according to claim 14 wherein the BIOS contains further
 instructions which are executed upon detection of invalid partition
 information, the instructions comprising:

- (a) redirecting the system to a reserved area wherein for each partition
 in the disc drive, a duplicate of valid partition information has been stored;
- 30 (b) presenting the user with duplicates of the valid partition
 information;
- (c) enabling the user to select one of the duplicates of the valid partition
 information which will replace invalid partition information;

- 5 (d) replacing the invalid partition information with the valid duplicate partition information which has been selected by the user; and
- (e) rebooting the computer, using the replaced partition records.

16. A disc drive comprising:

- 10 a disc;
- a set of partition information describing usage allocation on the disc;
- and
- means for maintaining the set of partition information.

- 15 17. The disc drive of claim 16 in which at least one backup copy of the set of partition information is retained in the disc drive.

18. The disc drive of claim 17 in which the means for maintaining the partition information further includes an executable set of instructions to
- 20 replace the set of partition information with the or one of the backup copies.